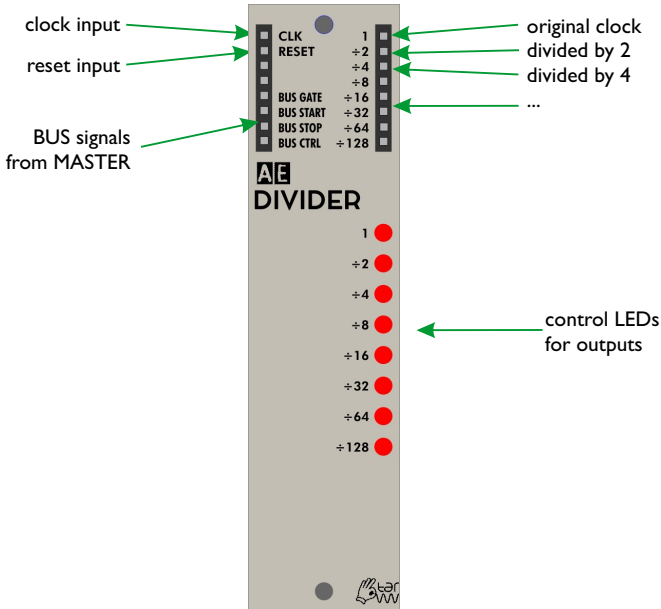
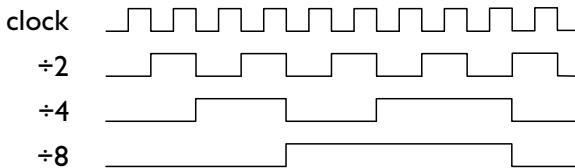


DIVIDER is a binary divider, dividing an incoming signal - no matter if it is a clock signal or audio - by 2, 4, 8,...128. This can be used for rhythmical structures but also for generating sub-octaves for audio signals.



The DIVIDER module works as follows: When connecting an alternating signal, e.g. from an LFO or a VCO / OSC, then, on each input cycle, the output  $\div 2$  changes its state from OFF-to-ON-to-OFF, meaning, the frequency is divided by 2 (it takes 2 input cycles to get a full cycle on the  $\div 2$  output). The further outputs  $\div 4$ ,  $\div 8$ ,  $\div 16$  work exactly the same, each one is based on the previous clock signal. In the end you get the following output pattern:



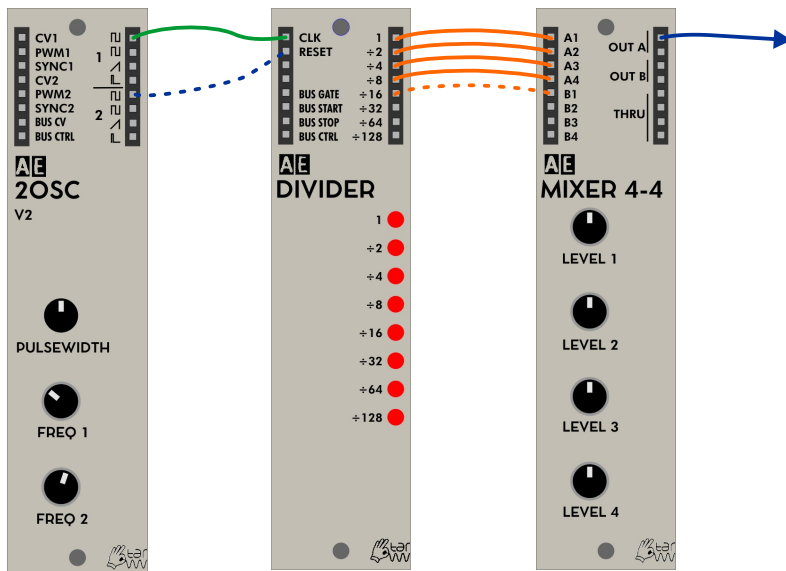
It can be seen here, that due to the binary operation the output doesn't follow the usual rhythmical 1/4th, 1/8th, 1/16 scheme where you would have ON for all outputs on the first clock; this is atopic for a more specialized module.

## The reset input

As soon as the reset input gets a „high“ voltage, all outputs are reset to off.

## Patch for suboctaves

One application for the DIVIDER module is as suboctave generator; as an inspiration you could use the following patch:



With the level controls of the mixer you can try various combinations of the different suboctaves.

The frequency of the oscillator should be a bit higher here, otherwise the higher divider outputs get below the audible range and only a clicking can be heard.

An interesting modification of this patch is the following:

connect another oscillator to the reset input of the DIVIDER and set it's frequency lower than the one feeding the clock input (shown as dotted blue line). Now, slowly change the frequency of the oscillator connected to the reset input; a quite interesting range of interfering, ringmodulator-like sounds can be heard.

Have fun!